



28 September 2021

Michael Bollweg
Bollweg Farms
Tumbleweed Lodge
20210 322nd Ave.
Harrold, SD 57536

RE: RED SUNFLOWER SEED WEEVILS

Dear Michael Bollweg,

The red sunflower seed weevil is a native pest of sunflower in South Dakota. When left unmanaged, the red sunflower seed weevil is capable of infesting approximately 80% of the developing seeds in a sunflower head. Since 2016, populations of red sunflower seed weevils have been observed in South Dakota that are 10-100x over the economic threshold of 4-6 weevils per sunflower head. In addition, SDSU Extension entomologists have received reports of insecticide application failures for red sunflower seed weevils since 2017. These reports were for the pyrethroid class active ingredient lambda-cyhalothrin. Since 2017, research from South Dakota State University has concluded that there are populations of red sunflower seed weevils with reduced susceptibility to pyrethroid class insecticides. On-going research is aimed at determining the level of reduced susceptibility and compare the populations tested in South Dakota to those from neighboring states. Our observations of red sunflower seed weevils in several counties in South Dakota during 2021 indicate that very large populations are present within fields. We are continuing to test populations using laboratory assays.

At this time, we recommend that all sunflower fields be scouted, and insecticides be applied when the threshold for red sunflower seed weevils is exceeded. Due to the numerous field failures, we are recommending that lambda-cyhalothrin not be used for management of the red sunflower seed weevil. We also are recommending that fields are scouted 24-48 hours after insecticide application to determine if the treatment successfully reduced the red sunflower seed weevil populations. To prevent additional issues with labeled insecticide products we recommend tank mixing two insecticides with different modes of action (not including lambda-cyhalothrin) or using a product that is not from the pyrethroid insecticide class.

Sincerely,

A handwritten signature in black ink, appearing to read 'Adam Varenhorst'.

Dr. Adam Varenhorst

Assistant Professor and Extension Field Crop Entomologist

South Dakota State University